

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (Currently Amended) A static gasket adapted to seal between a first sealing surface and an opposed second sealing surface that are secured together such that a clamp load is applied to the static gasket by the first and second sealing surfaces, the static gasket comprising:

a generally flat carrier member having a generally planar top surface facing the first sealing surface and an opposite surface facing the second sealing surface;

a first stopper member located on said top surface, said first stopper member formed independently from said carrier member;

a second stopper member on said top surface in spaced relationship to said first stopper member, said second stopper member formed independently from said carrier member; said first and second stopper members forming a cavity therebetween, ~~with each having a height above said top surface;~~ and

an elastomeric seal member located in said cavity, said cavity having a volume that is greater than the volume of said elastomeric seal member, said elastomeric seal member having at least one sealing bead, said sealing bead having an apex which extends from a portion of said top surface, said first and second stopper members each having a height above said portion of said top surface from which said apex extends, said apex having a height that ~~and~~ is greater than said height of said first

and second stopper members, and said apex is adapted to compress to said height of said first and second stopper members, with said first stopper member and said second stopper member preventing said seal member from being over compressed while the gasket is subjected to the clamp load from the first sealing surface and the second sealing surface.

2. (Original) A gasket as claimed in Claim 1 wherein said at least one sealing bead has a shape selected from a group consisting of rectangular, square, triangular, void-volume, polygonal, semi-oval, semi-elliptical, semi-round, and truncated triangular.

3. (Cancelled)

4. (Previously Presented) A gasket as claimed in Claim 1 wherein said elastomeric seal member is formed of a polymer material selected from the group consisting of fluorocarbon, silicone, fluorosilicone, butyl, ethylene propylene diene monomer, ethylene-acrylate, polyacrylate, isoprene, perfluoropolymer, natural rubber, epichlorohydrin, nitrile, hydrogenated nitrile and thermoplastic elastomer.

5. (Original) A gasket as claimed in Claim 1 wherein said carrier member has a thickness of less than 1.0mm.

6. (Original) A gasket as claimed in Claim 1 wherein said carrier member has a thickness of 0.01 mm to 0.75mm.

7. (Previously Presented) A gasket as claimed in Claim 1 wherein the height of said first stopper member and the height of said second stopper member are different.

8. (Previously Presented) A gasket as claimed in Claim 1 wherein said first stopper member and said second stopper member are made of a material selected from the group consisting of a polymer, metal, ceramic and composite fiber board.

9. (Original) A gasket as claimed in Claim 1 wherein said apex is compressed between 1.5% to 70%.

10. (Currently Amended) A static gasket adapted for sealing between two opposed mating surfaces, said static gasket comprising:

a generally flat carrier member having a generally planar top surface and an opposite surface;

a first pair of stopper members on said top surface, said first pair of stopper members formed independently from said carrier member, one of said first pair of stopper members in spaced relation to the other of said first pair of stopper members to form a first cavity therebetween, the one and the other of said first pair of stopper members having a first height above said top surface;

a second pair of stopper members on said opposite surface, said second pair of stopper members formed independently from said carrier member, one of said second pair of stopper members in spaced relation to the other of said second pair of

stopper members to form a second cavity therebetween, the one and the other of said second pair of stopper members having a second height above said opposite surface;

a first elastomeric sealing member on said top surface and ~~interposed said first pair of stopper members~~ within said first cavity, said first cavity having a volume that is greater than the volume of said first elastomeric sealing member, said first elastomeric sealing member having at least one sealing bead, said sealing bead having an apex which extends from a portion of said top surface, the one and the other of said first pair of stopper members having a first height above said portion of said top surface from which said apex extends; and

a second elastomeric sealing member on said opposite surface and ~~interposed said second pair of stopper members~~ within said second cavity, said second cavity having a volume that is greater than the volume of said second elastomeric sealing member, said second elastomeric sealing member having at least one sealing bead, said sealing bead having an apex which extends from a portion of said top surface, the one and the other of said second pair of stopper members having a second height above said portion of said top surface from which said apex extends;

whereby when said first and second elastomeric sealing members are adapted to be clamped between the two opposed mating surfaces under a clamp load such that, said at least one bead of said first elastomeric member is compressed to said first height and said at least one bead of said second elastomeric member is compressed to said second height, so that said first pair of stopper members and said second pair of stopper members limit the compression on said first and second elastomeric sealing members, respectively.

11. (Currently Amended) ~~An elastomeric~~ A static gasket as claimed in Claim 10 wherein at least one of said first and second said elastomeric sealing members is formed by a cure system selected from a group consisting of addition ion cure, condensation cure, free radical cure, catalytic cure, infra-red radiation cure and ultraviolet cure.

12. (Cancelled)

13. (Previously Presented) A static gasket as claimed in Claim 10 wherein said carrier member has a thickness between 0.01 mm to 1.0 mm.

14. (Previously Presented) A static gasket as claimed in Claim 10 wherein said carrier member is selected from a group consisting of a polymeric layer, a layer of woven fabric, a layer of non-woven fabric, a layer of metal, a gas diffusion layer, a graphite plate, a proton exchange membrane, a composite fiber board, rubber coated metal layer, and a ceramic layer.

15. (Previously Presented) A static gasket as claimed in Claim 10 wherein said first pair of stopper members has a shape factor between 0.15 to 10.

16. (Cancelled)

17. (Currently Amended) A static gasket adapted to seal between a first sealing surface and an opposed second sealing surface that are secured together such that a clamp load is applied to the static gasket by the first and second sealing surfaces, the static gasket comprising:

a generally flat carrier member with a generally planar first surface adapted to face said first sealing surface and a second surface adapted to face said second sealing surface;

a first stopper member located on said first surface, said first stopper member formed independently from said carrier member, said first stopper member including a pair of spaced compression limiters forming a first cavity therebetween; and

an elastomeric seal member formed on said first surface of said carrier member ~~adjacent to said first stopper member~~ within said first cavity and having a second height above said first surface that is greater than said first height, said first cavity having a volume that is greater than the volume of said elastomeric seal member, said first stopper member adapted to prevent said seal member from being over compressed while the gasket is subjected to the clamp load from the first sealing surface and the second sealing surface.

18. (Cancelled)

19. (Previously Presented) The static gasket as claimed in Claim 17 wherein said first stopper member is molded on said carrier member.

20. (Previously Presented) The static gasket as claimed in Claim 17 further comprising: an adhesive layer on said second surface of said carrier member.

21. (Previously Presented) The static gasket as claimed in Claim 17 wherein said first stopper member is formed of a material selected from a group including a polymer, metal, ceramic and composite fiber board.

22. (Previously Presented) The static gasket as claimed in Claim 17 further comprising:

a second stopper member located on said second surface and having a first height above the second surface; and

a second elastomeric seal member formed on said second surface adjacent to said second stopper member and having a second height above said second surface that is greater than said first height above the second surface, said second stopper member adapted to prevent said second seal member from being overcompressed while the gasket is subjected to the clamp load from the first sealing surface and the second sealing surface.

23. (Previously Presented) The static gasket as claimed in Claim 17 wherein said thickness of said carrier member is between 0.01 mm to 0.75mm.

24. (Previously Presented) The static gasket as claimed in Claim 17 wherein said first stopper member is formed of an elastomeric material, said elastomeric material having a shape factor between 0.15 to 10.

25. (Previously Presented) The static gasket as claimed in Claim 22 wherein said second stopper member includes a pair of spaced compression limiters forming a second cavity therebetween, with the second elastomeric seal located in the second cavity.

26 - 39. (Cancelled)

40. (Previously Presented) The static gasket as claimed in claim 17 wherein the carrier member has a thickness, and the elastomeric seal member has a thickness that is greater than the thickness of the carrier member.

41. (New) A gasket as claimed in Claim 1 wherein said first and second stopper members each have a height above said portion of said top surface when said gasket is in an unloaded state.

42. (New) A static gasket as claimed in Claim 10 wherein said first pair of stopper members have a first height above said first portion when said gasket is in an unloaded state.